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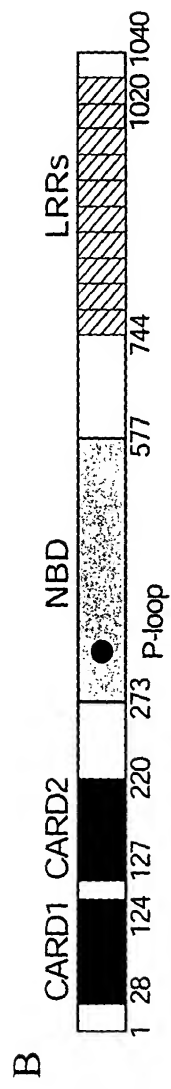
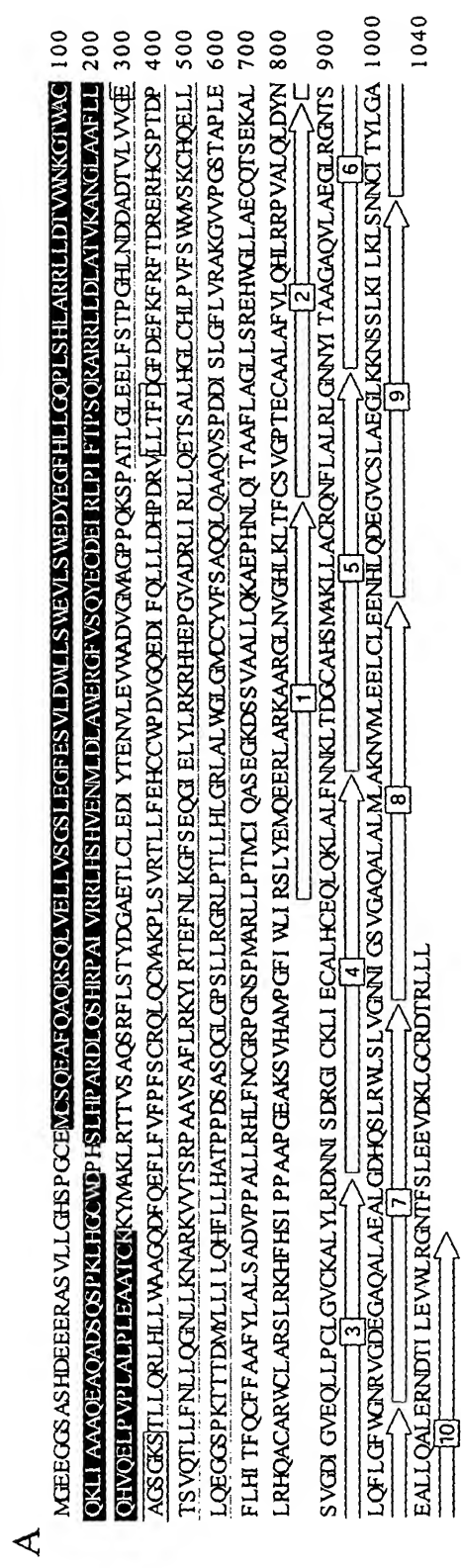


Figure 1

A

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Nod2(2)	127	SEHP-AGDQCSHPPATVRRHSHV	---ENMIDLAWEGFVSQECDEIRPIET	PSQARRLLDLATVKNGLAFLLOHVCE	LPVPALPTEARTCK		
Nod1	15	ESPEHQLKSNRELLVTHENTQ	---QAVNMLKNDVPSAEAEIVCACTPO	PDKVRLLDAVOSKEEVSEFVLLOQ	LEDAVMDLSPMLE		
RICK	434	-GLAQOQSKEEDIVNCTEACI	---NOSDALISRDLMKEDVAVSTKPTR	---TSKVRLLDTDDIOEEFKVIOKLQ	---NMGLQOPYETIV		
ARC	6	-EPSETIDRERKRWETLCDSG	---LHLDALVAKGVLGTPEYBADAQPA	---ERRVRLLLVQSKQBAQOELCAQOQVSPDPANDWQVOP			
RAIDD	1	VEADQVIRSRLECAEVALEG	---LVLQVLYOEGILTEVIOENAOCTG	---FKTKMLLDILPSRQAPADTFELDS	LCERFWNEELKARBEAM		
Caspase-2	15	WPFHQETKQKRWVLAQGLHS	---BLEHLEKQITTEPEELQAKVS	---SQNVLLNLLPQPOQADAFCEALRE	---TQGHLEDMLLTIL		
Ced-3	2	NGDERSLERNIMPSSEHMD	---ELEVLIAKQVNSDNGDMNSCGTV	---FEKRELVKAVOREDVADAFVDALES	---TGEGLAEVIELEA		
Ced-4	2	LCDECHALSTHETRLIHDPERP	---DALVYLEGKATFEDHSELISKVST	---ELERIANETIYRROASELGLIDGFNY	---NNOSHLADELEPYI		
Caspase-9	1	MDDEFRLLRCRERLVEBLQD	---QMDVLSGSEELHPHETEDQAGSGSRQCARLID	---LETRQSQAELFFICLED	---TQODMLASFLRTNR		
Apaf-1	1	MDAKARNCLOHREALEKDKTS	---KINQEMISDCETLISEEKVNEPTQ	---QQAAMLIKMLIKONDSVSVFVALLHESYKQ	LAALHHDGIPV		
c-IAP1	453	WAGDDLSMRKVRMALEQOLTCVL	---PIIDNLLKAVNINKQEHDLIKQKTOI	---FQAGEELIDTWKQNAANIFRNCLE	---IDSTLYKGLFMDQK		

B

Nod2	273	PATLG-----EELESTPGHNDADTVLVGEGAGSGKSTLLQRLHLLWAAGODFOBEFVPP	-----FSCROLOCWAKP	---LSVRLLPFP	---CCMPDVGOEDIFQALLDHPD
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Ced-4	128	MTGQIREYHVRDVTKKLDENCDIDSPFSETHGRAGSGKSVLASQLSKSDQLGTHYDSHVLKDSGTAPKSTFDLFTDILMLKSEDDILNFPSPVEHYTSVLRKRMKCNALIDRP			
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Nod1	383	---NLCSISSEFFCKITFCQFQHPERAFEGSPQLPDCTMTL	---IDVTEVTEVHLNRPSS	---IYQNRTRSPETLFRGRDTLCSLG	---QVAHRCMERELAVFQETVQALSGQE
Apaf-1	313	VSILGILLDFPNRMEYL	-----KQLEKQKQFRIRKESVDVTEADDEMSQVEMLRREDIKQNYTTL	---LILQKQVAVPKVLCILN	---DMETEREDILQEFVYKSL
Ced-4	331	ATLMMFKSCBPKTEEKMAQL	---NNKLESLGLVGEICITPYSKGELIYMAQRCYEVLSDEDSALAP	---VVMPPGVDIPV	---KLVSCITPVDLCSNEEQDLDDEVDRLKRLSKRGA

C

		α	β
Repeat 1	744	RSSEYEMQEEERUARKYARGNLVGHUKLTP	
Repeat 2	772	CSVGPTECAAPAFVLOHLRRPVAQLQDY	
Repeat 3	800	NSVGDIGVEQLLPQ	---GVCKALYLRD
Repeat 4	825	NNESDRGIYKLIQCSLHCEQLQDALFN	
Repeat 5	853	NKUTDGCASHAKIACRQNLALRLGN	
Repeat 6	881	NYETAGAQVLAEGRGNTSLQFQIANG	
Repeat 7	909	NRNGDEGAQDAEALCDHOSLRWLSVG	
Repeat 8	937	NNAGSVGAQADALPAKYNVLEELCLBE	
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Figure 2

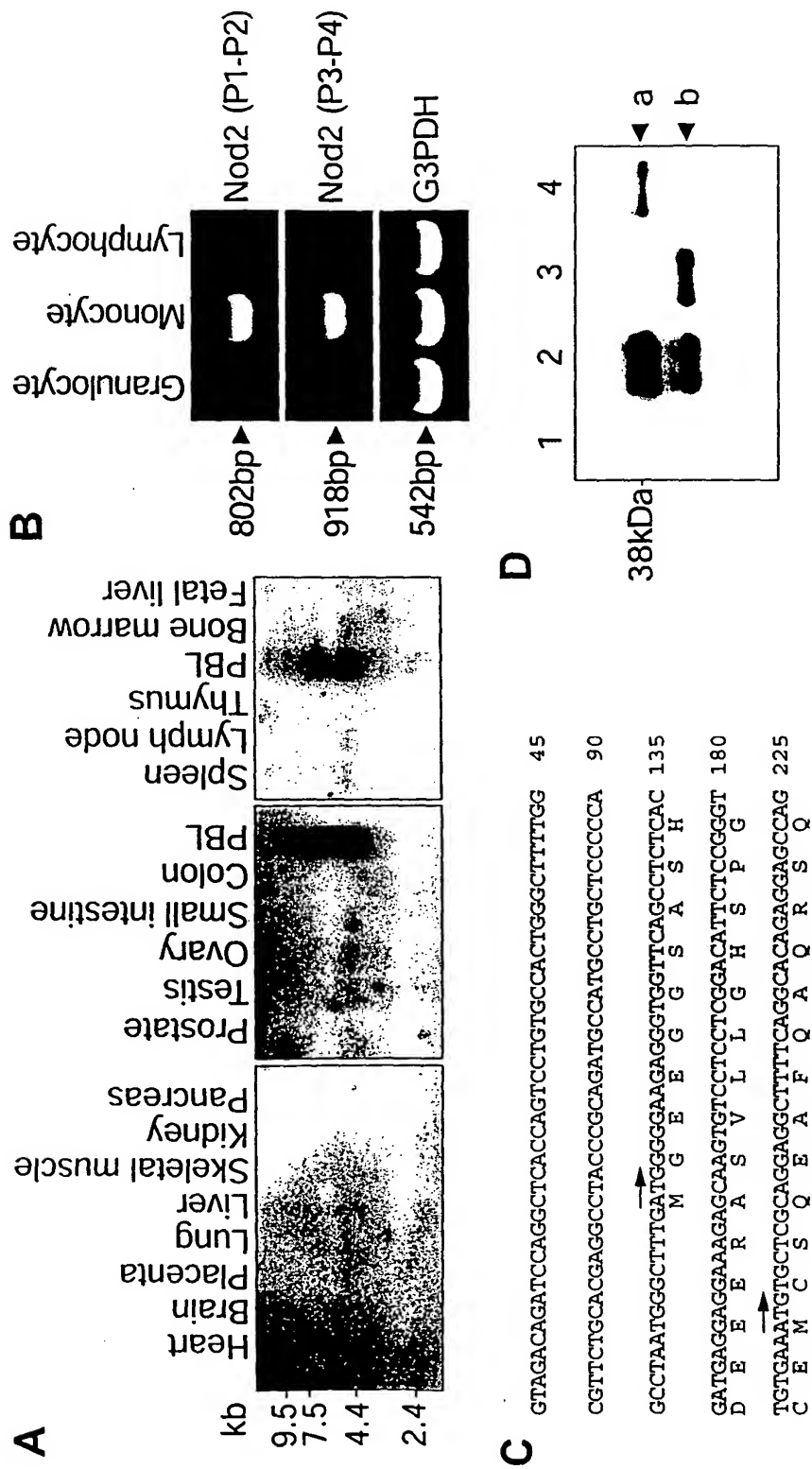


Figure 3

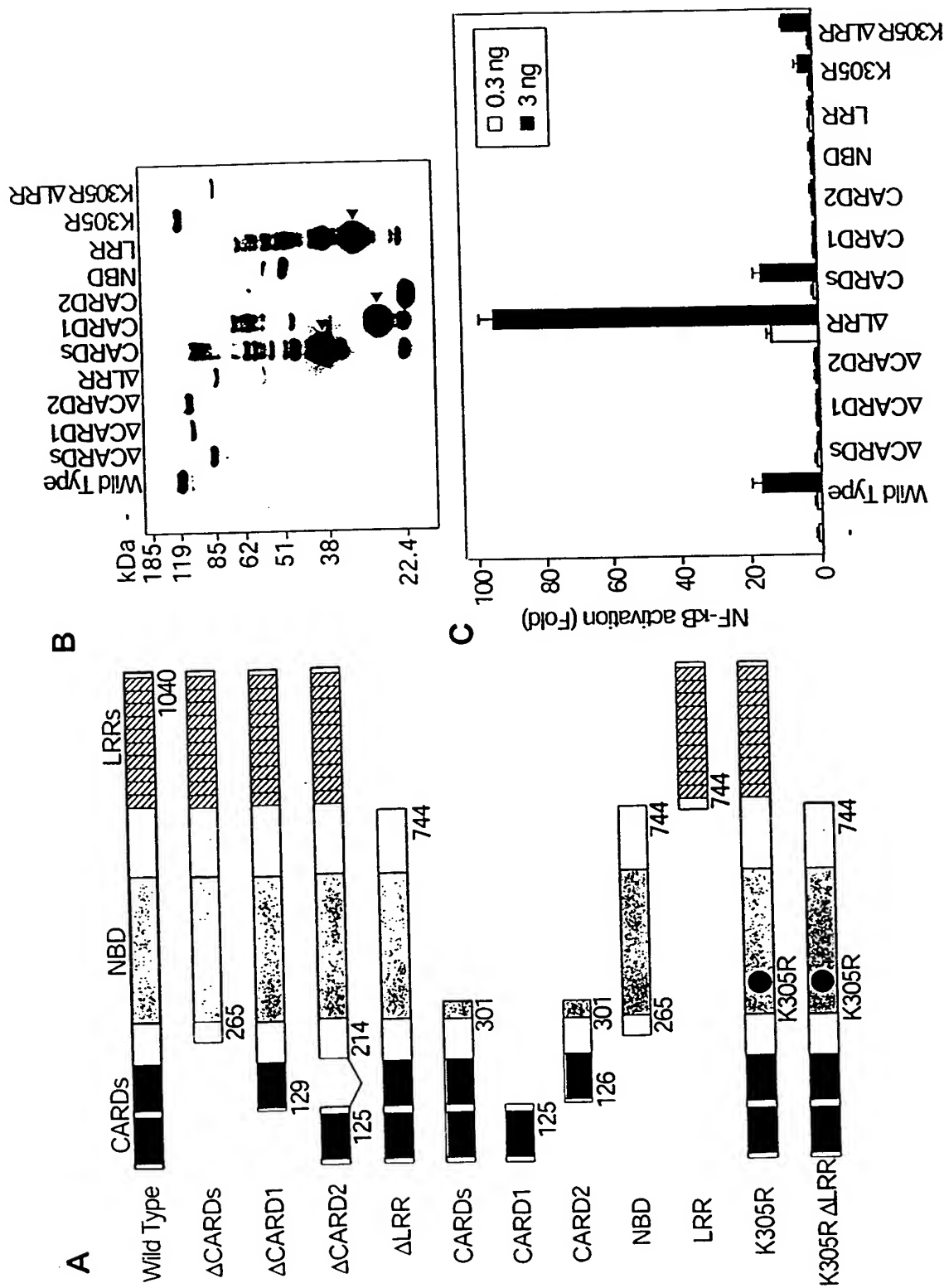


Figure 4

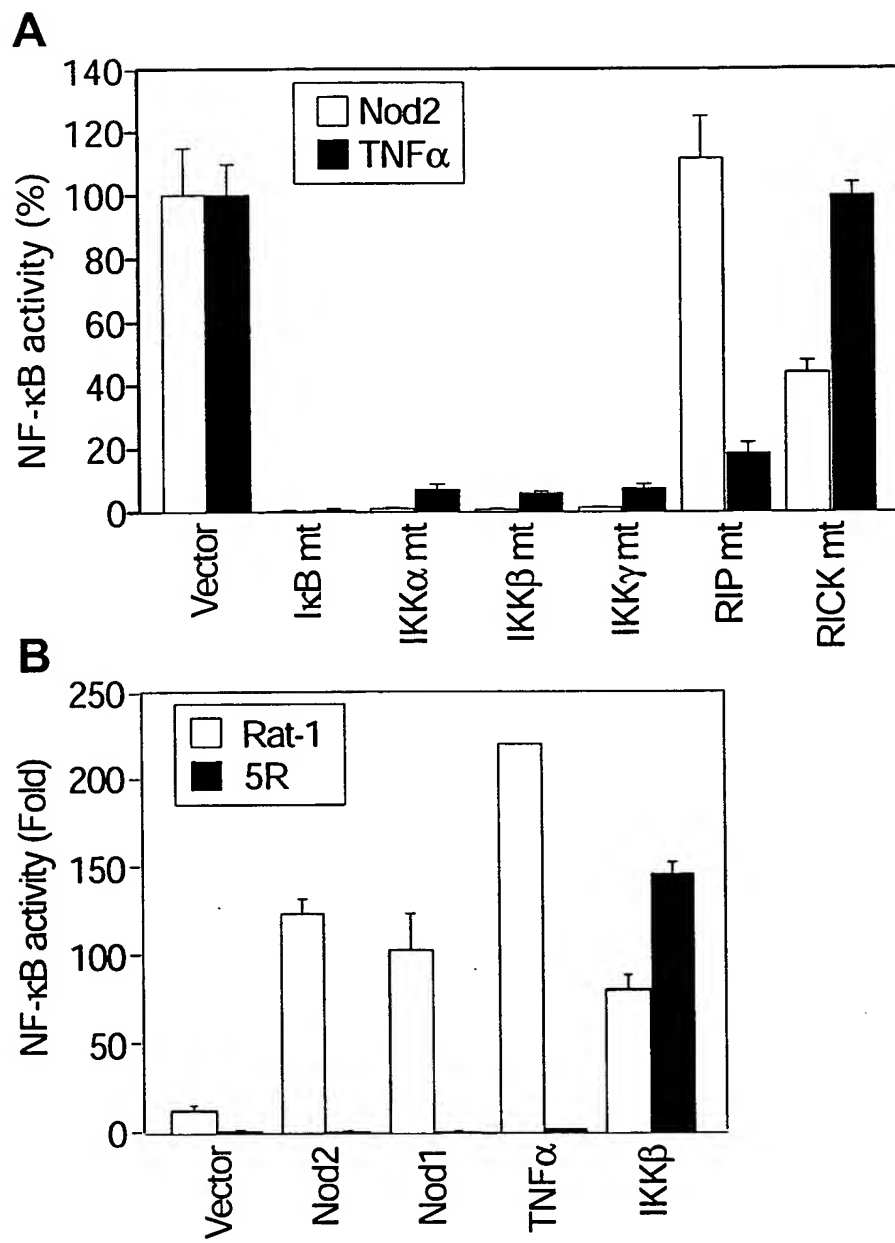


Figure 5

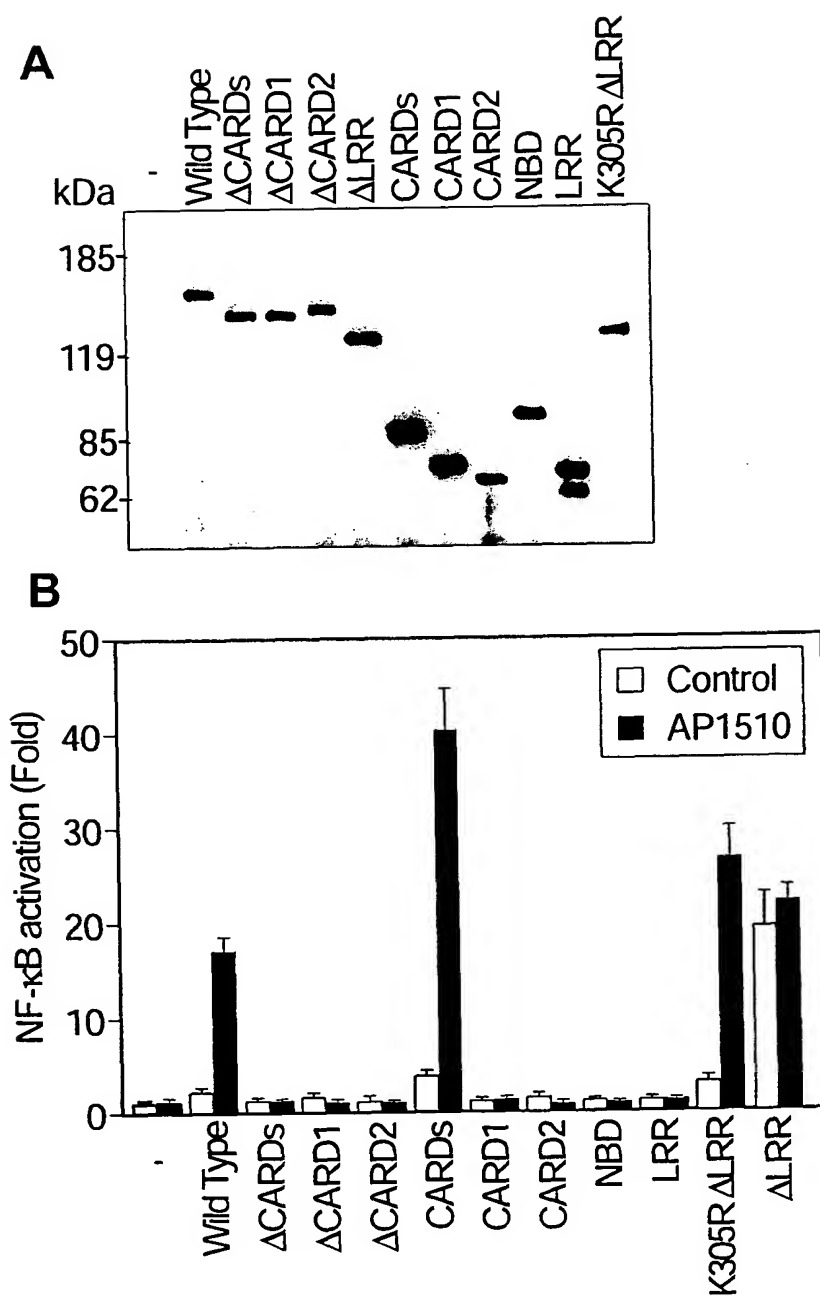


Figure 7

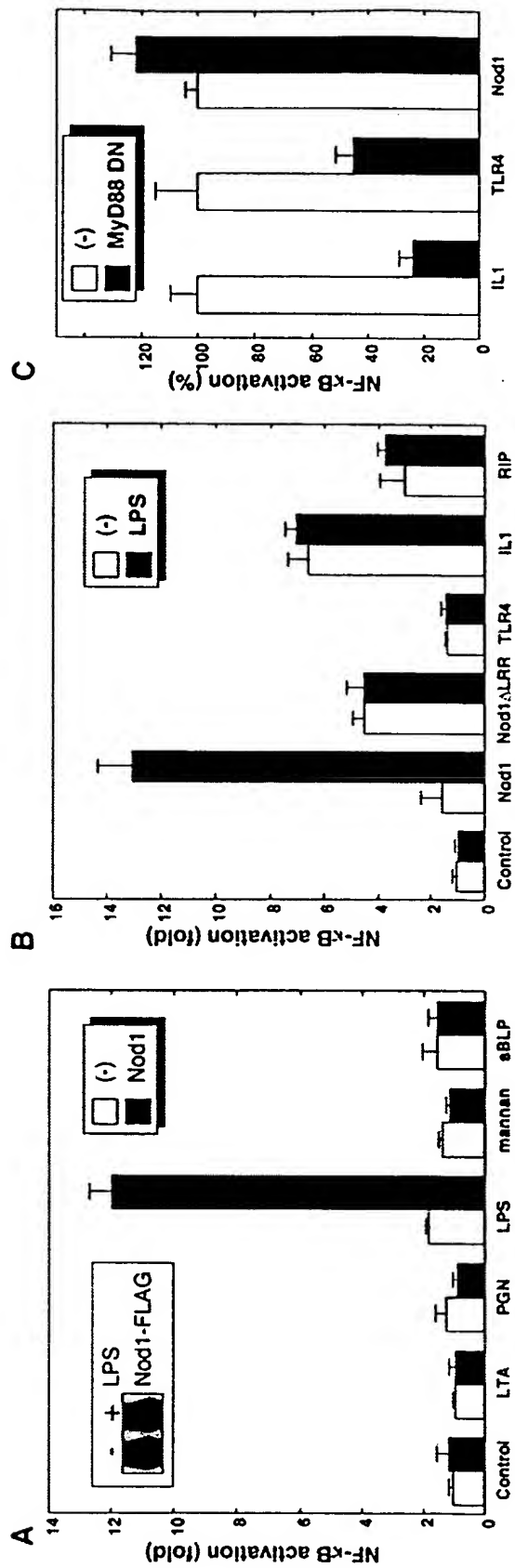


Figure 8

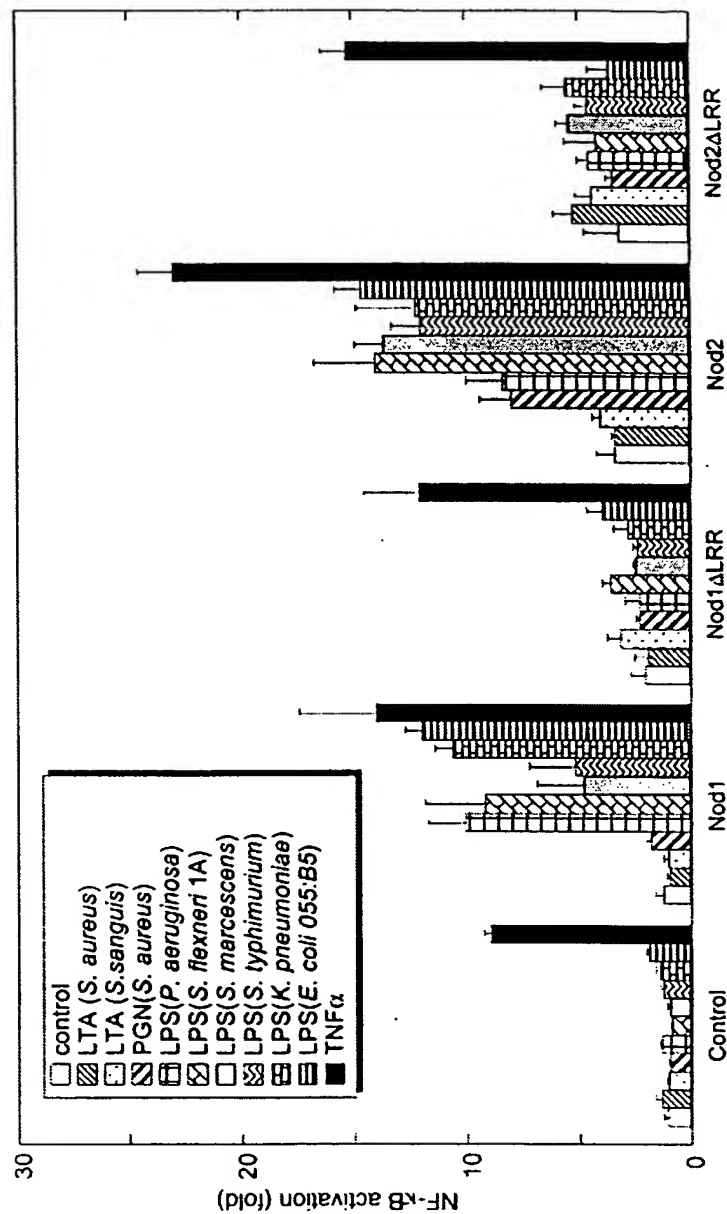


Figure 9

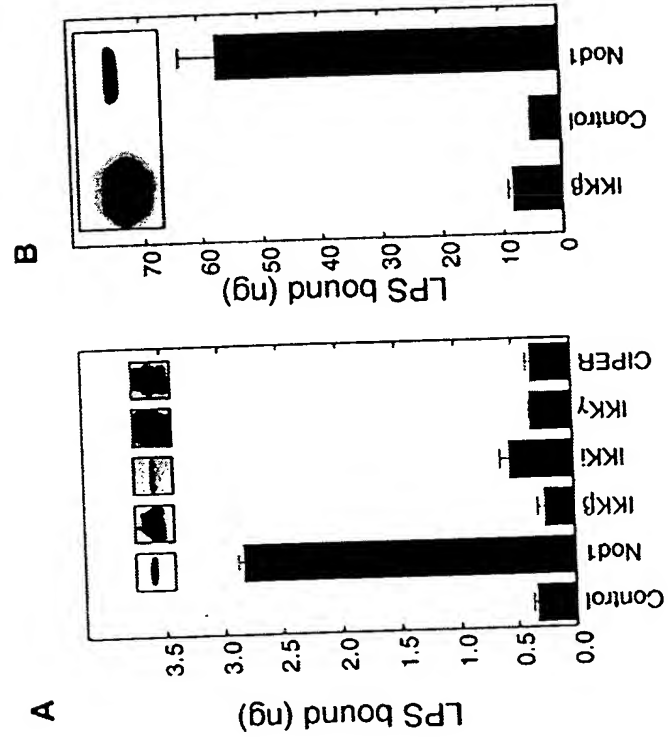


Figure 10

Figure 11

SEQ ID NO:33

Nod2 cDNA sequence

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Figure 12

SEQ ID NO:1

Nod2 cDNA sequence

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ttatgctgta aataatcaga ggggaataaa ctggtgagtc aaaac	4485

Figure 13

SEQ ID NO:2

MGEEGGSASH DEERASVLL GHSPGCEMCS QEAFQAQRSQ LVELLVSGSL EGFESVLDWL
LSWEVLSWED YEGFHLLGQP LSHLARRLLD TVWNKGTWAC QKLIAAAQEA QADSQSPKLH
GCWDPHSLHP ARDLQSHRPA IVRRLHSHVE NMLDLAWERG FVSQYECDEI RLPIFTPSQR
ARRLLDLATV KANGLAAFL L QHVQELPVPL ALPLEAATCK KYMAKLRTTV SAQSRFLSTY
DGAETLCLED IYTENVLEVW ADVGMAGPPQ KSPATLGLEE LFSTPGHLND DADTVLVVGE
AGSGKSTLLQ RLHLLWAAGQ DFQEFLFVFP FSCRQLQCMA KPLSVRTLLF EHCCWPDVGQ
EDIFQLLLDH PDRVLLTFDG FDEFKFRFTD RERHCSPTDP TSVQTLLFNL LQGNLLKNAR
KVVTSRPAAV SAFLRKYIRT EFNKGFSEQ GIELYLRKRH HEPGVADR LI RLLQETSALH
GLCHLPVFSW MVSCHQELL LQEGGSPKTT TDMYLLILQH FLLHATPPDS ASQGLGPSLL
RGRLPTLLHL GRLALWGLGM CCYVFSQQQL QAAQVSPDDI SLGFLVRAKG VVPGSTAPLE
FLHITFQCFE AAFYLALSAD VPPALLRHLF NCGRPGNSPM ARLLPTMCIQ ASEGDSSVA
ALLQKAEPHN LQITAAFLAG LLSREHWGLL AECQTSEKAL LRRQACARWC LARSLRKHFH
SIPPAAPGEA KSVHAMPFI WLIRSLYEMQ EERLARKAAR GLNVGHLKLT FCSVGPTeca
ALAFVLQHLR RPVALQLDYN SVGDIGVEQL LPCLGVCKAL YLRDNNISDR GICKLIECAL
HCEQLQKLAL FNNKLTGCA HSMAKLLACR QNFLALRLGN NYITAAGA QV LAEGLRGNTS
LQFLGFWGNR VGDEGAQALA EALGDHQLR WLSLVGNNIG SVGAQALALM LAKNVMLEEL
CLEENHLQDE GVCSLAELK KNSSLKILKL SNNCITYLGA EALLQALERN DTILEVWLRG
NTFSLEEVDK LGCRDTRLLL *

1001469-10001

Figure 14

SEQ ID NO:3

MCSQEAFAQQ RSQLVELLVS GSLEGFESVL DWLLSWEVLS WEDYEGFHLL GQPLSHLARR
LLDQTVWNKGT WACQKLIAAA QEAQADSQSP KLHGCWDPHS LHPARDLQSH RPAIVRRLHS
HVENMLDLAW ERGFVSQYEC DEIRLPIFTP SQRARRLLDL ATVKANGLAA FLLQHVQELP
VPLALPLEAA TCKKYMALR TTVSAQSRFL STYDGAETLC LEDIYTENVL EVWADVGMAG
PPQKSPATLG LEELFSTPGH LNDDADTVLV VGEAGSGKST LLQRLHLLWA AGQDFQEFLE
VFPFSCRQLQ CMAKPLSVRT LLFEHCCWPD VGQEDIFQLL LDHPDRVLLT FDGFDEFKFR
FTDRERHCSP TDPTSVQTLT FNLLQGNLLK NARKVVTSRP AAVSAFLRKY IRTEFNLKGF
SEQGIELYLR KRHEPGVAD RLIRLLQETS ALHGLCHLPV FSWMVSKCHQ ELLQEGGSP
KTTTDMYLLI LQHFL LHATP PDSASQGLGP SLLRGRLLPTL LHLGRLLALWG LGMCCYVFS
A
QQLQAAQVSP DDISLGFLVR AKGVVPGSTA PLEFLHITFQ CFFAAFYLLAL SADVPPALLR
HLFNCGRPGN SPMARLLPTM CIQASEGKDS SVAALLQKAE PHNLQITAAF LAGLLSREHW
GLLAECQTSE KALLRRQACA RWCLARSLRK HFHSIPPAAP GEAKSVHAMP GFIWLIRSLY
EMQEERLARK AARGLNVGHL KLTFCSVGPT ECAALAFVLQ HLRRPVALQL DYNSVGDIGV
EQLLPCLGVC KALYLRDNNI SDRGICKLIE CALHCEQLQK LALFNNKLTG GCAHSMKLL
ACRQNFALR LGNNYITAAG AQVLAEGLRG NTSLQFLGFW GNRVGDEGAQ ALAEALGDHQ
SLRWLSLVGN NIGSVGAQAL ALMLAKNVML EELCLEENHL QDEGVCSLAE GLKKNSSLKI
LKLSNNCITY LGAEALLQAL ERNDTILEVW LRGNTFSLEE VDKLGCRDTR LLL*

1001425.10001

Figure 15
SEQ ID NO:34

Nod2a AA sequence, Mutant

MGEEGGSASH DEEERASVLL GHSPGCEMCS QEAFQAQRSQ LVELLVSGSL EGFESVLDWL
LSWEVLSWED YEGFHLGQP LSHLARLLD TVWNKGTWAC QKLIAAAQEA QADSQSPKLH
GCWDPHSLHP ARDLQSHRPA IVRRLHSHVE NMLDLAWERG FVSQYECDEI RLPIFTPSQR
ARRLLDLATV KANGLAAFL L QHVQELFVPL ALPLEAATCK KYMAKLRTTV SAQSRFLSTY
DGAETLCLED IYTENVLEW ADVGMAGPPQ KSPATLGLEE LFSTPGHLND DADTVLVVGE
AGSGKSTLLQ RLHLLWAAGQ DFQEFLLFVP FSCRQLQCM KPLSVRTLLF EHCCWPDVGO
EDIFQLLLDH PDRVLLTFDG FDEFKFRFTD RERHCSPTDP TSVQTLLEFN LQGNLLKNAR
KVVTSRPAAV SAFLRKYIRT EFNLKGFEQ GIELYLRKRH HEPGVADRLI RLLQETSALH
GLCHLPVFSW MVSCHQELL LQEGGSPKTT TDMYLLILQH FLLHATPPDS ASQGLGPSLL
RGRLPTLLHL GRLALWGLGM CCYVFSQQQL QAAQVSPDDI SLGFLVRAKG VVPGSTAPLE
FLHITFCFF AAFYLALSAD VPPALLRHLF NCGRPGNSPM ARLLPTMCIQ ASEGKDSSVA
ALLQKAEPHN LQITAAFLAG LLSREHWGLL AECQTSEKAL LRRQACARWC LARSLRKHFH
SIPPAAPGEA KSVHAMPFI WLIRSLYEMQ EERLARKAAR GLNVGHLKLT FCSVGPTCA
ALAFVLQHLR RPVALQLDYN SVGDIGVEQL LPCLGVCKAL YLRDNNISDR GICKLIECAL
HCEQLQKLAL FNNKLTGCA HSMAKLLACR QNFLALRLGN NYITAAGA QV LAEGLRGNTS
LQFLGFWGNR VGDEGAQALA EALGDHQLR WLSLVGNNIG SVGAQALALM LAKNVMLEEL
CLEENHLQDE GVCSLAELK KNSSLKILKL SNNCITYLGA EALLQAP*

1004259.102601

FIGURE 16

Nod2 Exon11, Wild type

cagacatgag caggatgtgt ctaagggaca ggtgggcttc agtagactgg ctaactcctg

cagtctcttt aactggacag tttcaagagg aaaaccaaga atccttgaag ctcaccattg

tatcttcttt tccagGTTGT CCAATAACTG CATCACCTAC CTAGGGGCAG AAGCCCTCCT

L S N N C I T Y L G A E A L L

GCAGGCCCTT GAAAGGAATG ACACCATCCT GGAAGTCTGg taaggccct gggcaggcct

Q A L E R N D T I L E V

gttttagctc tccgaacctc agtttttcta tctgtaaaat ggggtgacgg gagagaggaa

tggcagaatt ttgaggatcc cttctgattc tgacattcag tgagaatgat tctgcatgtg

Nod2 Exon11, Mutant

cagacatgag caggatgtgt ctaagggaca ggtgggcttc agtagactgg ctaactcctg

cagtctcttt aactggacag tttcaagagg aaaaccaaga atccttgaag ctcaccattg

tatcttcttt tccagGTTGT CCAATAACTG CATCACCTAC CTAGGGGCAG AAGCCCTCCT

L S N N C I T Y L G A E A L L

GCAGGCCCTT TGAAAGGAAT GACACCATCC TGAAGTCTG gtaaggcccc tgggcaggcc

1004259-102604

Q A P *

tgttttagct ctccgaacct cagtttttct atctgtaaaa tggggtgacg ggagagagga

atggcagaat ttgaggatc ccttctgatt ctgacattca gtgagaatga ttctgcatgt

g

10014269.102601
109201.63241001